AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	Page 1 of Pages 11

2. AMENDMENT/~~MODIFICATION~~ NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
003	**September 29, 1999**	99-302100014	

6. ISSUED BY	CODE	7. ADMINISTERED BY *(If other than Item 6)*	CODE
Bureau of Reclamation **Lower Colorado Region** **P.O. Box 61470** **Boulder City NV 89006-1470**	LC-3117 **http://www.lc.usbr.gov/~g3100/**		

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State, and ZIP code)*	(T)	9A. AMENDMENT OF SOLICITATION NO.
	T	**99-SI-30-0011**
		9B. DATED (SEE ITEM 11) **August 20, 1999**
		10A. MODIFICATION OF CONTRACT/ORDER NO.
CODE / FACILITY CODE		10B. DATED (SEE ITEM 13)

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[**X**] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [**X**] is extended, [ ] is not extended.

Offerors must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning 1 copy of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (if required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(**T**)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT/ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. **IMPORTANT**: Contractor [ ] is not [ ] is required to sign and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/~~MODIFICATION~~ (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

Project Title: Two Mile Wash Restoration, Kaibab-Paiute Indian Reservation, Kaibab, Arizona

Purpose of Amendment: The purpose of this amendment is to (1) provide the answers to questions from the site visit; (2) make revisions to the specifications; and (3) extend the bid opening date.

Receipt of Bids: The date for receipt of bids is hereby extended from October 5, 1999 to October 14, 1999. The time and place for receipt of bids remain 2:00 p.m., local time, at the Bureau of Reclamation, Lower Colorado Regional Office, Nevada Highway and Park Street, Annex Building, Room AA-123, Boulder City, Nevada.

Acknowledgment: See block 11 above regarding how to acknowledge this amendment. The acknowledgment must be received at the place designated for receipt of bids (see block 8 of the "Solicitation, Offer, and Award," Standard Form 1442).

Bid Modification: See block 11 above if you have submitted your bid and now desire to modify it or withdraw it.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY_____ (Signature of Contracting Officer)	16C. DATE SIGNED

Description of the Changes:

1. This amendment provides the answers to questions from the site visit, which was held on September 17, 1999.

2. Minor revisions were made to Division 2 – Sitework of the specifications.

3. In Attachment 1, Drawing No. X-300-2125 (Plan -- Details) was revised.

Instructions:

Remove	***Replace with Revised***
N/A	Site Visit Q&A (2 pages)
Pages C-19 thru C-24	Pages C-19 thru C-24
Drawing No. X-300-2125	Drawing No. X-300-2125

Questions & Answers
Two Mile Wash Restoration Site Visit
September 17, 1999

1) Can vegetation removed from the impoundment be piled and burned or buried, or does it need to be hauled off site?

Answer: The vegetation does not need to be hauled off site. The Contractor can bury it, but we would prefer that the Contractor burn it. Currently, the Contractor is not required to obtain a permit to conduct a burn. Prior to burning, the Contractor must call either Roger Holland or Danny Bulletts with the Tribe at (520) 643-7245. The Contractor must also notify the Forest Service fire watch.

2) Who is the contact with the tribe for water? Are there any charges?

Answer: Contact Duane with the Tribal Housing Authority at (520) 643-7289 for water. Water from the main village is $1.50/1000 gallons. Water from Steamboat is $2.50/1000 gallons.

3) What is the time frame for award and notice to proceed after opening of bids?

Answer: We anticipate making an award within 30 to 60 days after the bid opening. The Notice to Proceed will be issued after performance and payment bonds are submitted and approved.

4) Is undisturbed material at the bottom of the piping trench considered compacted?

Answer: The detail shows a 6-inch overexcavation and backfill.

5) Is there a size limit for equipment in the impoundment?

Answer: There is no size limit for equipment. However, dozers and blades cannot be used.

6) How deep was the test pit? Was it wet?

Answer: The test pit was 5 feet deep and dry.

7) Are there equipment restrictions at the inlet works?

Answer: There are no equipment restrictions.

8) Are there other acceptable ways of closing the existing drain?

Answer: Yes - welded plug or covers.

DIVISION 2 -- SITEWORK

SECTION 2.1--STREAM STABILIZATION

2.1.1. General

a. This Section covers stabilization of Moccasin Wash.

2.1.2. Stabilization

a. The bank areas of Moccasin Wash in the vicinity of the proposed diversion gallery and the downstream waterfall are to be excavated in accordance with Reclamation's publication entitled "Reclamation's Safety and Health Standards" and to allow access to the project area.

(1) Riprap shall be placed in the channel for stabilization and erosion control as directed by the Contracting Officer or Contracting Officer's Representative. The placed riprap shall be shaped to encourage flow in the middle of the channel.

2.1.3. Materials

a. Riprap shall be 12-inch to 24-inch diameter. The material proposed shall meet the following standards:

Parameter	Reclamation Specification
Abrasion	<40%
Specific Gravity	>2.62
Absorption	<1.5%

b. Geotextile material shall underlay all placed riprap for erosion control and be anchored or pinned as required. The material shall have a puncture rating of 135 pounds or greater and ultra-violet stability of 90% or greater. The equivalent of LINQ GTF-400E or better is acceptable.

2.1.4. Measurement and Payment

Measurement, for payment, for furnishing and placing riprap will be made by cubic yard of material which is placed.

Payment for furnishing and placing riprap will be made at the unit price per yard bid therefor in the schedule. This unit price will include all materials, labor, equipment, and incidentals required to complete the work as specified in this paragraph.

Payment for terracing, widening, and sloping Moccasin Wash for safety and access will be included in the lump sum price bid therefor in the schedule for "Slope stabilization and access, installation of diversion structures, installation of diversion pipeline." This lump sum price will include all materials, labor, equipment, and incidentals required to complete the work as specified in this paragraph.

SECTION 2.2--STREAM DIVERSION

2.2.1. General

a. This Section covers diversion of flow from Moccasin Wash.

2.2.2. Diversion

a. The diversion of flow from Moccasin Wash consists of excavation for and installation of a diversion box, Moccasin return flow pipe, diversion pipe connection, flow infiltration gallery, diversion pipe control valves, and revegetation of disturbed areas.

Low flows (up to approximately 5-10 cfs) from Moccasin Wash are to be diverted into Two Mile Wash. Elevation difference between the proposed pipe inlet and outlet structures is approximately 30-feet over a run of approximately 1900-feet. Flows range from 1 cfs to 2000 cfs. For flows less than 10 cfs, approximately 20% of the flow is to be maintained in Moccasin Wash. Flows greater than 10 cfs are to remain in Moccasin Wash. The diversion structure will be gated to allow the diversion to be closed prior to anticipated storm events.

b. The typical infiltration gallery and manifold detail is shown on Drawing No. X-300-2125. The proposed gallery and upstream and downstream cutoff barriers will span the low flow channel width (approximately 40 feet).

(1) The upstream cutoff barrier shall be constructed of concrete and shall be the same width as the sheet piling barrier. The barrier shall be 5.0 feet deep x 8.0 inches thick and placed below the upstream side of the gallery as shown. The upstream cutoff barrier is to be keyed into the stream embankments no less than 2.0 feet.

(2) The downstream cutoff barrier shall be constructed of sheet piling in accordance with Section 5.1. The barrier shall extend to a depth of 17.0 feet or refusal below original ground surface.

% (3) The gallery shall be lined with ~~30 mil PVC or EPDM~~ **a permeable geotextile** material. The liner shall be overlain with 1.8-foot bed of clean gravel overlain by a permeable geotextile and 2 feet of 12- to 24-inch riprap. The riprap shall be placed and shaped in a manner that protects the side slopes and encourages flows into the center of the channel. Gallery piping as shown consists of seven (7) 10-inch-diameter slotted drain pipes at 40-foot lengths with 1% slope entering a common 24-inch manifold pipe with 0.4% slope.

c. The diversion box will allow for inflow from the manifold and outflow into the diversion and Moccasin return flow pipelines. Internally, the box shall be set up to allow for approximately 20% of the flows to remain in Moccasin Wash at low flows (<10 cfs). The Moccasin return flow pipeline as shown in the detail is 10-inch diameter with a 0.9% slope. The diversion pipeline is detailed in Section 2.3. The outflows shall have control features that allow for flows to be adjusted or turned off by responsible tribal personnel.

The diversion box shall be placed and covered in a manner that will allow valves to be safely operated during high flows and inhibit entry by livestock, debris, or sand. The restored bank line shall be compacted and riprapped to assist with stabilization.

2.2.3. Materials

a. Riprap requirements as specified in Paragraph 2.1.3 apply.

~~b. The gallery liner shall be 30 mil or better PVC or EPDM material.~~

% **b**. The geotextile fabric used within the gallery shall have a sieve size of approximately #80-#100 and flow rating of 85 gpm/ft^2. The fabric shall inhibit fine soils from entering the gallery while allowing the passage of water. LINQ GTF-160EX or its equivalent is acceptable.

% **c**. The gravel shall be washed and screened and composed of not less than 95 percent hard, dense, nonangular, stable particles. Soluble soft materials like limestone or gypsum, soft materials, or sand will not be acceptable.

% **d**. The diversion box shall be prefabricated concrete in accordance with Section 4.2.1. with a wooden cover that is removable for maintenance access. The wooden cover shall be constructed of 3x8-inch material, minimum, and shall be physically attached to the box. Internally the diversion box shall be configured by use of a weir wall to provide 80% of captured flow into the diversion pipeline and 20% returned to Moccasin Wash. The box shall include and be set up with all stubbing, fittings and connections. Inflow should be stubbed for 24-inch piping. Diversion pipeline stubbing shall be 18-inch diameter. Moccasin return flow stubbing shall be 10-inch diameter. The tops of the inlet and outlet stubs shall be at equal height from the bottom of the box. The Contractor may propose alternate pipe diameter for the diversion and Moccasin return pipelines. The proposal shall include computations that demonstrate the ability of the pipe to meet the required carrying capacities.

% **e**. Submittals. - The Contractor shall submit product data sheets for the perforated pipe, 10- and 24-inch-diameter PVC pipe and canal gates. The Contractor shall also submit
% information detailing the connection between the 10-**inch perforated** and 24-inch-diameter pipe.

% **f**. Materials. -

(1) Pipe. ~~- ASTM D1784, Schedule 40~~

% **(a) AASHTO M252-97 - Corrugated Polyethylene Pipe for 10-inch pipe.**
%
% **(b) AASHTO M294-97 - Corrugated Polyethylene Pipe for 24-inch pipe.**

~~(2) Gasketed joint. - ASTM D3139~~

~~(3) Gaskets. - ASTM F477~~

% **(2) Fittings. - AASHTO M252 or AASHTO M294**
%
% **(3) Perforated pipe. - Holes shall not exceed 3/8-inch in diameter, 45 degrees apart,**
% **no rotation, with an inlet area of 1.5 square inches per foot.**

% **g**. The Contractor shall provide the required control structures and associated operators. The operator handles shall extend approximately 3 feet above the final grade over the box.

% **h**. The Contractor shall supply all piping for the infiltration gallery, manifold, and Moccasin return flow.

2.2.4. Measurement and Payment

Payment for excavation, furnishing and installing of the infiltration gallery, manifold pipe, diversion box, Moccasin return flow pipe, and diversion pipe connection will be made at the lump sum price bid therefor in the schedule. This lump sum price will include all materials, labor, equipment, and incidentals required to complete the work as specified in this paragraph.

SECTION 2.3--DIVERSION PIPELINE

2.3.1. General

a. This Section covers the diversion pipeline from Moccasin Wash to Two Mile Wash.

2.3.2. Diversion Pipeline

a. General. - The Contractor shall furnish and install an 18-inch-diameter PVC diversion pipeline from Moccasin Wash to Two Mile Wash consisting of the pipeline, clean-outs, thrust block, and riprap apron at the outfall. The alignment profile is shown on Drawing No. X-300-2126. The pipeline is approximately 1,900 feet long.

The Contractor shall excavate the trench, backfill the trench and compact backfill in the trench in accordance with Division 3, Earthwork, and Drawing No. 11 (40-D-6453).

Pipeline configuration shall be 18-inch pipe with a slope of 0.7% and a capacity of 8 cfs with surface clean-outs at approximately 600 to 700-foot intervals. The Contractor shall ensure that the proposed pipe meets the required size, general specifications, load bearing, and compaction requirements for the installation.

b. Submittals. - The Contractor shall submit product data sheets for the pipe.

c. Materials. -

% (1) Pipe. - ASTM D1784, ~~Schedule 40~~ **SDR 64**

(2) Gasketed joint. - ASTM D3139

(3) Gaskets. - ASTM F477

(4) Canal Gate. - The canal gate shall be Type 4, Model C-10 as manufactured by Waterman Industries, Inc., P.O. Box 456, Exeter CA 93221, telephone (559) 562-4000, or equal with the following salient characteristics:

(a) The gates shall be self-contained with yoke mounted bench stand operators with rising stem.

(b) Frame, Cover (slide), Handwheel - cast iron. - ASTM A-126, Class B. The frame and cover shall be cast iron with machined seating faces. Seating surfaces of both frame and cover shall be assembled so that maximum clearance between seating faces shall be .004 when in fully closed and wedged position. The frame shall be spigotback. The cover shall be a dome design which will withstand maximum seating head of 23 feet. The guide rails and head rails shall be minimum 1/4-inch thick structural steel designed and built to withstand the total thrust of the gate slide due to water pressure and wedge action.

There shall be one adjustable cast iron wedge per side, located on the horizontal centerline of the gate. The cover wedge shall be integrally cast with the cover, while the other half of the wedging system shall be attached to the guide rail with two bolts. The wedges shall have smooth bearing surfaces and shall be adjustable to insure effective contact between gate seating surfaces.

(c) Stem - leaded cold rolled steel. - ASTM A-108, Type 12L14. The stem shall be 6 feet long and shall be cold finished steel of suitable length and ample strength for the intended service. The stem diameter shall be capable of withstanding twice the rated output of the operator at 40 pound pull, and shall be supported such that the L/r ratio for the unsupported part of the stem shall not exceed 200.

When rising stem extension is used, the stem extension shall be supported such that a right installation shall be provided. Stem guides shall be spaced that the L/r ration of the stem does not exceed 200.

(d) Handwheel type lifts shall have threaded bronze lift nut to match stem. Threads shall be machine cut, acme type and right hand unless otherwise specified. An arrow shall be cast on the handwheel to indicate the direction of rotation to open the gate. A maximum of 40 pounds shall be required to operate the gate after it is unseated.

d. The Contractor shall meet the minimum safe trenching and excavation guidelines contained within the Reclamation publication entitled "Reclamation's Safety and Health Standards."

e. The diversion pipeline shall terminate in Two Mile Wash. The Contractor shall supply and place a riprap apron at the pipe outlet in Two Mile Wash to dissipate the outfall and reduce the erosional affects in the wash.

f. Existing fences may be removed by the Contractor where necessary for performance of the work and shall be rebuilt in as good condition as found.

g. The Contractor shall supply and sow native grass seeds in areas disturbed during construction activities.

2.3.3. Materials

a. Riprap requirements as specified in Paragraph 2.1.3. apply.

b. The Pipeline shall run from the diversion box (Moccasin Wash) to the outlet in Two Mile Wash. The proposed pipe shall meet the required size, general specifications, load bearing, and compaction requirements for the installation. The Contractor shall provide all connectors, pipe and covers for pipeline clean-outs.

2.3.4. Measurement and Payment

Payment for furnishing and placing riprap will be made at the unit price per yard bid therefor in the schedule. This unit price includes geotextile, all other materials, labor, equipment, and incidentals required to complete the work as specified in this paragraph.

Payment for excavation and furnishing and installing of the diversion pipeline will be made at the lump sum price bid therefor in the schedule. With the exception of furnishing and placing riprap, this lump sum price will include all materials, labor, equipment, and incidentals required to complete the work as specified in this paragraph.

SECTION 2.4--WASH RESTORATION

2.4.1. General

a. This Section covers the Two Mile Wash Restoration.